Analytical Laboratory

13339 Hagers Ferry Road
Huntersville, NC 28078-7929
McGuire Nuclear Complex - MG03A2
Phone: 980-875-5245 Fax: 980-875-4349

Order Summary Report

Order Number: **J13040057**

Project Name: MIAMI-FORT NPDES - MONTHLY

Customer Name(s): Craig Mercer, Mark J Harper, Todd Spade, Tara Thomas, Matthew Hoyt, Michael

Customer Address: 11021 BROWER RD.

NORTH BEND, OH 45052

Lab Contact: Mary Ann Ogle Phone: 980-875-5274

Report Authorized By: (Signature) MAO5125 (154363) 2013.04.11 15:58:49 -04'00' **Date:** 4/11/2013

Mary Ann Ogle

Program Comments:

Please contact the Program Manager (Mary Ann Ogle) with any questions regarding this report.

Data Flags & Calculations:

Any analytical tests or individual analytes within a test flagged with a Qualifier indicate a deviation from the method quality system or quality control requirement. The qualifier description is found at the end of the Certificate of Analysis (sample results) under the qualifiers heading. All results are reported on a dry weight basis unless otherwise noted. Subcontracted data included on the Duke Certificate of Analysis is to be used as information only. Certified vendor results can be found in the subcontracted lab final report. Duke Energy Analytical Laboratory subcontracts analyses to other vendor laboratories that have been qualified by Duke Energy to perform these analyses except where noted.

Data Package:

This data package includes analytical results that are applicable only to the samples described in this narrative. An estimation of the uncertainty of measurement for the results in the report is available upon request. This report shall not be reproduced, except in full, without the written consent of the Analytical Laboratory. Please contact the Analytical laboratory with any questions. The order of individual sections within this report is as follows:

Job Summary Report, Sample Identification, Technical Validation of Data Package, Analytical Laboratory Certificate of Analysis, Analytical Laboratory QC Reports, Sub-contracted Laboratory Results, Customer Specific Data Sheets, Reports & Documentation, Customer Database Entries, Test Case Narratives, Chain of Custody (COC)

Certification:

The Analytical Laboratory holds the following State Certifications : North Carolina (DENR) Certificate #248, South Carolina (DHEC) Laboratory ID # 99005. Contact the Analytical Laboratory for definitive information about the certification status of specific methods.

Sample ID's & Descriptions:

Sample ID	Plant/Station	Collection Date and Time	Collected By	Sample Description
2013007171	MIAMI-FORT	02-Apr-13 8:30 AM	Mark Harper	OUTFALL 002
2013007172	MIAMI-FORT	02-Apr-13 9:30 AM	Mark Harper	OUTFALL 608

2 Total Samples

Technical Validation Review

Checklist:

COC and .pdf report are in agreement with sample totals and analyses (compliance programs and procedures).	☑ Yes	☐ No
All Results are less than the laboratory reporting limits.	☐ Yes	☑ No
All laboratory QA/QC requirements are acceptable.	☑ Yes	☐ No

Report Sections Included:

- ☑ Job Summary Report
- ☑ Sample Identification
- ☑ Technical Validation of Data Package
- ☑ Analytical Laboratory Certificate of Analysis
- ☐ Analytical Laboratory QC Report
- ☐ Sub-contracted Laboratory Results
- ☐ Customer Specific Data Sheets, Reports, & Documentation
- ☐ Customer Database Entries
- ☑ Chain of Custody
- ☐ Electronic Data Deliverable (EDD) Sent Separately

Reviewed By: Mary Ann Ogle Date: 4/11/2013

Certificate of Laboratory Analysis

Order # J13040057

Site: OUTFALL 002 **Sample #: 2013007171**
Collection Date: 02-Apr-13 8:30 AM Matrix: NPDES

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
TOTAL DISSOLVED SOLIDS								
TDS	**720**	mg/L		10	1	SM2540C	04/08/2013 12:43	TJA7067

Site: OUTFALL 608 **Sample #: 2013007172**
Collection Date: 02-Apr-13 9:30 AM Matrix: NPDES

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
ALKALINITY (FIXED END POINT 4.5)								
Alkalinity (mg/L CaCO3)	**1500**	mg/L (CaCO3)		0.1	1	SM2320B	04/04/2013 13:51	TJA7067
INORGANIC IONS BY IC								
Chloride	**7700**	mg/L		200	2000	EPA 300.0	04/08/2013 18:16	JAHERMA
Fluoride	**12**	mg/L		10	100	EPA 300.0	04/08/2013 18:16	JAHERMA
Sulfate	**8600**	mg/L		200	2000	EPA 300.0	04/08/2013 18:16	JAHERMA
TOTAL METALS BY ICP								
Boron (B)	**398**	mg/L	M4	1	20	EPA 200.7	04/05/2013 11:28	DJSULL1
Iron (Fe)	**0.065**	mg/L		0.01	1	EPA 200.7	04/05/2013 11:28	DJSULL1
Manganese (Mn)	**2.74**	mg/L		0.005	1	EPA 200.7	04/05/2013 11:28	DJSULL1
TOTAL RECOVERABLE METALS BY ICP-MS								
Arsenic (As)	**< 20**	ug/L		20	1	EPA 200.8	04/05/2013 14:02	KRICHAR
Barium (Ba)	**120**	ug/L		20	1	EPA 200.8	04/05/2013 14:02	KRICHAR
Cadmium (Cd)	**< 20**	ug/L		20	1	EPA 200.8	04/05/2013 14:02	KRICHAR
Chromium (Cr)	**< 20**	ug/L		20	1	EPA 200.8	04/05/2013 14:02	KRICHAR
Copper (Cu)	**< 20**	ug/L		20	1	EPA 200.8	04/05/2013 14:02	KRICHAR
Lead (Pb)	**< 20**	ug/L		20	1	EPA 200.8	04/05/2013 14:02	KRICHAR
Zinc (Zn)	**< 20**	ug/L		20	1	EPA 200.8	04/05/2013 14:02	KRICHAR
TOTAL DISSOLVED SOLIDS								
TDS	**31000**	mg/L		200	1	SM2540C	04/08/2013 12:43	TJA7067
TOTAL SUSPENDED SOLIDS								
TSS	**50**	mg/L		5	1	SM2540D	04/04/2013 11:26	SWILLI3

Qualifiers:

M4 The spike recovery value was unusable since the analyte concentration in the sample was disproportionate to the spike level. The associated Laboratory Control Spike recovery was acceptable.

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

Duke Energy Analytical Laboratory
Mail Code MGO3A2 (Building 7405)
13339 Hagers Ferry Rd
Huntersville, N. C. 28078
(704) 875-5245 Fax: (704) 875-4349

Analytical Laboratory Use Only

LIMS # J13040057 | Sample Class NPDES | Samples Originating From OHIO
Logged By SB | Date & Time 4/3/13 1205 | SAMPLE PROGRAM NPDES
Vendor | Cooler Temp (C) 1.5
PO # | MR #

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DISTRIBUTION
ORIGINAL to LAB,
COPY to CLIENT

Customer must Complete

1)Project Name: MIAMI-FORT NPDES Monthly (Week 1- April 2, 2013)
2)Phone No:
3)Client: Miami-Fort - Michael Byrd, Tara Thomas, Matt Hoyt
4)Fax No:
5)Business Unit:
6)Process:
7)Resp. Center To:
8)Project ID:
9)Activity ID:
10)Mail Code:

Customer to complete all appropriate non-shaded areas.

[15]Preserv.: 1=HCl, 2=H_2SO_4, 3=HNO_3, 4=Ice, 5=None

[14]Collection Information

LAB USE ONLY [11]Lab ID	[12]Chem Desktop No.	[13]Sample Description or ID	Date	Time	Signature	[17]Comp.	[18]Grab	TDS	Cl, F, SO4	B, Fe, Mn, As, Ba, Cd, Cr, Cu, Pb, Zn	TSS	Alkalinity
								4	4	3	4	4
2013007171		Outfall 002	4-2-13	0830	Mark Harper		X	1				
2013007172		Outfall 608	4-2-13	0930	Mark Harper		X	1	1	1	1	1

[16]Analyses Required

Customer to complete appropriate columns to right

Customer to sign & date below - fill out from left to right.

	Date/Time		Date/Time
1) Relinquished By: Mark Harper	4-2-13 0950	2) Accepted By: L. Laws	4/3/13 1050
3) Relinquished By:		4) Accepted By:	
5)Relinquished By:		6)Accepted By:	
7)Relinquished By:		8)Accepted By:	
9)Seal/Locked By: Mark Harper	4-2-13 0950	10) Seal/Lock Opened By: L. Laws	4/3/13 1053
11)Seal/Locked By:		12)Seal/Lock Opened By:	

Customer, IMPORTANT! Please indicate desired turnaround.

[22]Requested Turnaround
10 Days X
*7 Days
*48 Hr
*Other
* Add. Cost Will Apply

Comments: ICP TOT - B, Fe, Mn IMS-TRM - As , Ba, Cd, Cr, Cu, Pb, Zn Fe HACH= 0.02 mg/L